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CANADIAN ENVIRONMENTAL PROTECTION ACT. REPORT FOR THE  
PERIOD APRIL 1991 TO MARCH 1992. 1992.

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# Canadian Environmental Protection Act



INST. FOR ENVIRONMENTAL STUDIES  
UNIVERSITY OF TORONTO



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## Report for the Period April 1991 to March 1992



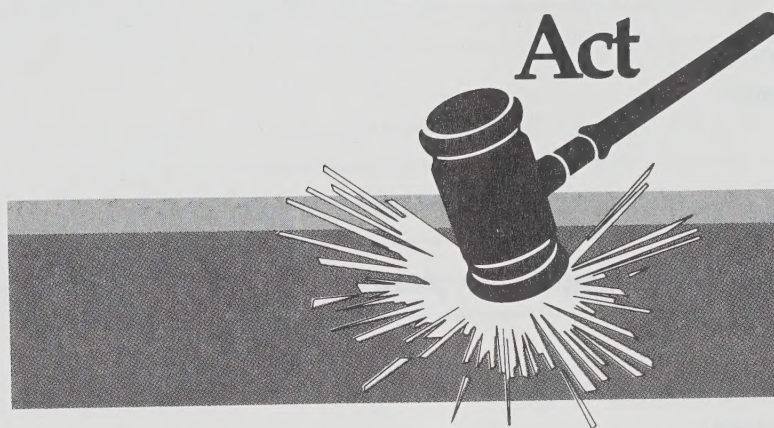


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# Canadian Environmental Protection Act



**Report for the Period  
April 1991 to March 1992**





At the end of each fiscal year, Environment Canada's Environmental Protection Directorate publishes an annual report on the *Canadian Environmental Protection Act* (CEPA) for Parliament. This report covers the period from April 1, 1991 to March 31, 1992.

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Regulatory Affairs and Program Integration  
Environmental Protection  
Environment Canada  
Ottawa, Ontario  
K1A 0H3  
Phone: (819) 953-1164

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## Minister's Message

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With the introduction of the *Canadian Environmental Protection Act* (CEPA) in 1988, the government set for itself an ambitious agenda. In the few short years since then, a great deal has been accomplished.

This past year has been a particularly eventful one for CEPA.

- More than \$300 million in new resources has been added to our enforcement, toxics, ozone depletion, ocean dumping, acid rain, smog and waste programs.
- Stringent new environmental controls have been introduced in the pulp and paper sector.
- Consultations have taken place on proposed amendments to Ocean Dumping Regulations to better protect the marine environment.
- A major report on the state of Canada's environment was released. It provides a detailed picture not only of the challenges ahead of us, but also of the successes we have achieved so far.
- New water quality guidelines, a code of practice for reducing CFC emissions, and a protocol for cleaning up contaminated sites have all been completed.

The CEPA annual report that follows gives a clear indication of the extent to which CEPA is based on sound science. Science ensures that our actions are appropriate, and science helps us to evaluate whether these actions are achieving our goal—to protect human health and the environment.

The report also shows, I believe, that environmental protection involves more than regulations. It involves research, new environmental technologies, public education and shared responsibility.

It is a pleasure for me to present this third annual report to Parliament, and to have the opportunity to thank all of those at Environment Canada and Health and Welfare Canada who are involved in implementing CEPA. I would also like to acknowledge the efforts of other departments and governments, as well as industry and the public, for their contribution towards environmental protection over the past year.

The year ahead will bring many new challenges. I am optimistic that we will build on our successes and bring equal energy and creativity to the tasks that lie ahead.

Jean J. Charest  
Minister of the Environment





## *Canadian Environmental Protection Act*

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CEPA was introduced in 1988 as a legislative framework that would be comprehensive, integrated and preventive in its approach.

CEPA's mandate covers toxic substances throughout the entire ecosystem, and may control any stage of a product's life cycle—from development, to manufacture and transportation, to disposal.

Through the Act, the federal government recognizes and encourages the shared stewardship of the environment—with businesses and consumers, and with other levels of government, at home and abroad.

As part of the government's plan to integrate environmental legislation, CEPA subsumes previous toxic substances regulations. Still, a number of other related Acts complement CEPA, such as those preserving our heritage, parks, wildlife, natural resources and threatened regions.

CEPA's primary focus is prevention—averting environmental problems before they occur. Preventive measures include strong regulations and enforcement mechanisms, non-regulatory approaches such as environmental codes of practice and guidelines, and incentives with industry.

Environment Canada and Health and Welfare Canada both develop CEPA regulations and guidelines, while Environment Canada's Environmental Protection Directorate administers the Act on behalf of the federal government.

## *Sharing our Responsibility for the Environment*

Environment Canada has a long tradition of involving Canadians in the design of its policies, the development of its programs, and the delivery of its services.

The Green Plan principle of all Canadians sharing responsibility for the environment has reaffirmed the importance of public consultations, and has set new standards in the way the government must conduct its business so that Canadians can become engaged in, and committed to, making sound environmental decisions. Working towards this end, Environment Canada is developing a "Guide of Best Practices" for consultations and partnerships.

Other initiatives in this area include an "Environmental Consultations Calendar," highlighting key environmental consultations by Environment Canada and other federal departments, and annual seminars to expand ties and develop closer working relationships with the business and labour communities. Two such seminars, Labour Connexion and Business Connexion, will take place respectively on September 13-14 and November 19-20, 1992.

In support of the goal to build effective environmental partnerships, Environment Canada is committed to an open dialogue and a constructive working relationship with other organizations.





## *CEPA's Channels for Cooperative Action*

CEPA is structured to provide opportunities for governments and experts in relevant disciplines to consult and coordinate their efforts. Mechanisms include advisory panels, the Federal-Provincial Advisory Committee and its working groups, as well as agreements with the provinces and territories.

### *Advisory Panels*

The Ministers of the Environment and Health and Welfare appoint experts from interest groups, industry and the academic community to advisory panels. It was one of these, the Priority Substances Advisory Panel, that advised the Ministers on CEPA's first Priority Substances List in 1988-89. The List identifies 44 potentially toxic substances that most urgently require assessment.

In addition to these panels, which deal with specific tasks, the Ministers are advised by the permanent Federal-Provincial Advisory Committee.

### *Federal-Provincial Advisory Committee*

Representatives from Environment Canada, Health and Welfare Canada, and each of the provinces and territories sit on the Federal-Provincial Advisory Committee (FPAC). This group ensures that governments consult, and take action together to protect the environment from the effects of toxic substances. FPAC also aims to achieve nationally consistent environmental standards.

At their November 1991 meeting, FPAC members were consulted on draft regulations, and on guidelines for the Environmental Choice Program. During the year, they commented on health risk notices pertaining to certain substances, federal and provincial regulatory initiatives, and updates on priority substances assessments. Periodically, FPAC establishes working groups to examine and report on specific toxic substances issues.

#### *The Federal-Provincial Working Group on Controls Harmonization (Ozone-Depleting Substances)*

FPAC created the Federal-Provincial Working Group on Controls Harmonization with the mandate of developing a coordinated national strategy to eliminate ozone-depleting substances in Canada. Information exchange among all levels of government is one of the main goals of this working group.

Members are developing a plan that would minimize emissions from existing equipment; reduce the demand for new CFCs by managing the existing supply; and maintain an adequate amount of CFCs for essential uses after CFCs are phased out.





In the spring of 1992, members presented a final report on their "Recovery and Recycling Action Plan for CFCs" to the Canadian Council of Ministers of the Environment Deputies Committee.

Priorities of the plan include:

- evaluating the current CFC inventory in Canada;
- ensuring that CFCs from equipment are recovered, recycled or reclaimed;
- developing, in collaboration with industry and trade associations, training courses for those who service equipment; and
- informing the public.

Canada's Environment Ministers, who consider CFC recovery and recycling a high priority, have agreed that all jurisdictions would have programs in place by the end of 1992.

### *The Federal-Provincial Working Group on Air Quality Guidelines and Objectives*

Over the past year, the Federal-Provincial Working Group on Air Quality Guidelines and Objectives developed draft air quality objectives for publication under CEPA. The objectives cover the "maximum desirable and acceptable concentrations" for carbon monoxide, nitrogen dioxide, and hydrogen fluoride, and "maximum acceptable and tolerable concentrations" for reduced sulphur compounds.

The group also developed a rationale for revising ground-level ozone objectives for the protection of health and vegetation.

### *The Federal-Provincial Working Group on CEPA Partnerships*

At its June 1991 meeting, FPAC created a working group of three provinces and the federal government to study some of the outstanding issues that have arisen during negotiations of administrative and equivalency agreements, and to recommend solutions.

In November 1991, the working group presented a draft report with solutions for most of the issues—including equivalency provisions, sanctions, confidential business information and testing techniques. The report, to be finalized in 1992, will help accelerate negotiations with the provinces and territories.

## *Agreements with the Provinces and Territories*

Within the framework of CEPA, the federal government may enter into administrative and equivalency agreements with the provinces and territories. While none have been signed to date, these types of agreements promise to be an important link between the federal government, the provinces and territories in the years to come. They will help governments to make the best use of available resources, while ensuring, at the same time, that environmental standards remain consistent.





### *Administrative Agreements*

Administrative agreements will allow governments to share the work involved in administering regulations, and may cover a range of activities, from inspections and enforcement, to monitoring and reporting.

Under an administrative agreement, the federal government would remain accountable, and would report on the agreement annually to Parliament.

Over the past year, the government worked closely with several provinces to develop draft agreements for administering pulp and paper regulations, which will be introduced under CEPA in 1992. Negotiations are proceeding quickly.

### *Equivalency Agreements*

Equivalency agreements would suspend the application of a federal CEPA regulation in a province or territory, in recognition of an equivalent provincial or territorial regulation. The federal government would still apply its federal regulations to federal lands, works and undertakings, and would report annually on the administration of equivalency agreements to Parliament.

In effect, an equivalency agreement is a contract between the federal Minister and his or her provincial or territorial counterpart for the cooperative delivery of a national environmental standard. A separate equivalency agreement with each province and territory must be negotiated for every CEPA regulation.

Negotiations are under way with some provinces on draft equivalency agreements for the Storage of PCB Materials Regulations, the Pulp and Paper Mill Defoamer and Wood Chips Regulations, and the Chlorinated Dioxins and Furans Release in Pulp and Paper Mill Effluents Regulations, all expected to be gazetted in 1992.





## *CEPA Across Canada*

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Environment Canada offices across the country—Atlantic, Quebec, Ontario, Western and Northern, and Pacific and Yukon Regions—are instrumental in the administration of CEPA, and have been involved in activities featured throughout this report.

Although Canada's regions share many of the same pollution problems, differences in their geography, natural resources and economies create regional environmental concerns. The regional offices bring these perspectives to the national environmental agenda. This is particularly important in the area of compliance, the first responsibility of the Regions. Within the framework of the annual National Inspection Plan, they can target specific threats that concern people living in their districts.

They also perform scientific research, and keep a close watch on problems in their areas. The Regions have become involved, for example, in assessing materials on the Priority Substances List.

To round out their support of federal activities, the Regions deal directly with the public, and often represent the Department in negotiations with the provinces on environmental issues.

### *Atlantic Region*

Over the past year, Environment Canada's Atlantic Region collaborated with the eastern provinces to confront the threat of acid rain. Together, the governments audited federal-provincial sulphur dioxide agreements. This work led to an amended agreement with New Brunswick, and ongoing negotiations with three provinces to reduce sulphur dioxide limits.

Also during the year, the Region invited public opinion on how to decommission PCB sites. Environmental groups, municipalities and industries participated in the process. Environment Canada began by evaluating its own sites, and then asked companies to decommission PCB-filled equipment. To ensure the safe transportation of PCB wastes to incineration sites, staff produced a training manual.

Among research and monitoring efforts, Atlantic Region completed:

- a review of polynuclear aromatic hydrocarbons in the eastern provinces;
- studies of the area's priority substances;
- a regional data base on toxic substances; and
- an investigation of lead contamination in urban ponds and the Halifax harbour.

As part of its coastal waters monitoring, the Region issued 12 warnings for ocean dumping violations, and conducted seven surveys using a specialized underwater remote-control vehicle.

In addition, staff visited a number of facilities to test compliance with Chlorobiphenyls Regulations, the Storage of PCB Wastes Interim Order, Ozone-Depleting Substances Regulations, Chlor-Alkali Mercury Release Regulations, and Phosphorus Concentration Regulations, among others.





## Quebec Region

Like other Regions, Quebec set enforcement and compliance priorities for the year. These included Asbestos Mines and Mills Release Regulations, Secondary Lead Smelter Release Regulations, as well as PCB and CFC regulations. Many inspections dealt specifically with the importation and illegal sale of CFCs.

Quebec reports that 94 per cent of facilities conformed with CEPA regulations after first inspection, largely due to a better understanding of the regulations.

Training remained a priority in 1991-92, as staff learned more about certain technical and legal aspects of CEPA.

Quebec Region is leading the assessment of one of the substances on the Priority Substances List, polycyclic aromatic hydrocarbons, and final results will be published in 1993.

## Ontario Region

Ontario Region held discussions with the Ontario Ministry of the Environment on a PCB waste equivalency agreement, and a pulp and paper administrative agreement pertaining to CEPA and the *Fisheries Act*.

In support of the Green Plan initiative "Starting in Our Own House," Ontario Region audited its own facilities, and launched a compliance promotion program directed at federal departments. It advised other federal departments on hazardous waste management, leaking underground storage tanks, and contaminated site cleanups.

The Region also completed an audit of all the wood preservation facilities in Ontario.

Following up on CFC import information from Customs and Excise (Revenue Canada), enforcement officers visited numerous companies, investigated six cases and issued one warning. They inspected more than 200 facilities listed on the PCB inventory, and issued five warnings.

In 1991-92, inspection priorities included the Ozone-Depleting Substances Regulations, the Storage of PCB Wastes Interim Order, Chlorobiphenyls Regulations, Vinyl Chloride Release Regulations, Chlor-Alkali Mercury Release Regulations, and Secondary Lead Smelter Release Regulations. Inspectors issued two directions. In addition to visiting regulated lead-processing facilities, enforcement officers inspected other lead-processing plants to determine if they were subject to the Secondary Lead Smelter Release Regulations.

Finally, Ontario Region conducted Domestic Substances List audits, and collected samples to test compliance with the Gasoline Regulations, and Phosphorus Concentration Regulations.





## *Western and Northern Region*

Western and Northern Region continued to work with the Department of National Defence, Health and Welfare Canada, Indian and Northern Affairs Canada, Fisheries and Oceans Canada, and the Government of the Northwest Territories on environmental surveys and clean-up plans for DEW Line Sites. The Region inspected sites, provided technical advice and information on regulations, and helped to set guidelines for cleaning up decommissioned sites in the Northwest Territories.

Western and Northern Region also assessed creosote-impregnated waste, a material on the Priority Substances List.

In the areas of compliance and emergency response, the Region reviewed its equipment and training needs, and developed a safety training course and a "Response to Spills Policy" for CEPA inspectors and emergency response teams.

## *Pacific and Yukon Region*

As in other parts of the country, monitoring continues to be an important gauge of environmental quality in the Pacific and Yukon Region. In recent years, for instance, researchers have detected a drop in dioxin and furan levels in birds along the Strait of Georgia, a change they attribute to the positive actions of pulp and paper companies. However, the environmental threats of industrial effluents are not over—osprey eggs near the Fraser and Thompson Rivers, and bald eagle eggs along British Columbia's southern coast continue to show high levels of potentially toxic substances.

Three Yukon residents requested an investigation of fish contamination in Lake Laberge. While the Department concluded there was no evidence of a CEPA violation at that time, the investigation remains open to any new evidence.

The Region worked with Howe Sound Pulp and Paper to test emissions of a recovery boiler at the company's mill in Port Mellon, B.C. It also analyzed stack emissions for toxic substances.

Finally, the Region studied leaching of wood preservatives—research that will contribute to upcoming guidelines for managing treated wood in sensitive aquatic environments.





## *CEPA Part I: Environmental Quality*

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### *Research and Monitoring*

To establish fair restrictions, and to foster the development of new technologies to meet those restrictions, the government supports research and monitoring activities. Scientific information helps to verify the progress of regulations, agreements and other non-regulatory instruments. Research also provides the public with accurate environmental information, and for this reason, the publication of results is important.

In addition to work at Environment Canada, Health and Welfare Canada conducts toxicology research. Health and Welfare is concerned with identifying hazardous substances, and confirming their links to adverse health effects.

### *River Road Environmental Technology Centre*

The River Road Environmental Technology Centre near Ottawa coordinates the National Air Pollution Surveillance Network, a system of 130 stations across Canada that measures air quality. During the past year, people outside the Department gained on-line access to the Network.

The Centre also tests emissions. In 1991-92, Environment Canada teamed up with the Canadian Gas Association to analyze emissions and fuel consumption of natural gas vehicles.

Also during the year, researchers developed a reference method for measuring chlorinated dioxins and furans in pulp and paper effluents.

Following a decade of research into the effect of oil spills in the Arctic, the Centre produced a comprehensive report on the subject, and developed a laser-based sensor that can detect oil slicks from aircraft.

### *Wastewater Technology Centre*

The Wastewater Technology Centre in Burlington, Ontario, established 20 years ago, has become the foremost Canadian facility in treatment and disposal technologies for municipal and industrial wastewaters and residues.

On July 1, 1991, the Centre became the first government-owned, contractor-operated facility in a move designed to accelerate the commercialization of new technologies.

The Centre's recent work includes the development of a computer model that predicts the fate and transportation of toxic contaminants in municipal sewage treatment plants.

In the field of industrial wastewater treatment, the Centre conducted detailed studies on pulp and paper effluent treatment





systems to verify that chlorinated organic compounds and other toxic compounds are removed.

In addition, the Centre investigated innovative pollution prevention technologies, such as membrane filtration of concentrated waste streams, a technique for recycling water and recovering waste.

The Centre also supported the Great Lakes Clean-up Program by evaluating treatment technologies for contaminated sediments, and by working with other levels of government to audit sewage treatment plants.

## *National Water Research Institute*

The National Water Research Institute (NWRI) conducts research to address current and emerging water quality problems. Research in support of CEPA currently focuses on toxic chemical assessments, analytical methodologies and quality assurance studies.

The Institute continues to assess the impact of effluents from the pulp and paper, mining and petrochemical industries. In particular, recent collaborative studies led by NWRI on effluents from pulp mills using chlorine bleaching have yielded interesting and important results.

Swedish studies in the 1980s had reported that fish were adversely affected by bleached kraft pulp mill effluents, and that organochlorines produced in the bleaching process were the likely cause. However, NWRI research to confirm the Swedish studies has determined, in both laboratory and field studies, that effluents from pulp mills that do not use chlorine or that use chlorine substitutes created the same effects on fish. Thus, even the total elimination of organochlorine production did not eliminate the effects on fish downstream.

These findings were instrumental in shaping the federal government's decision in 1992 to not use Adsorbable Organic Halogen (AOX) as a parameter for regulating pulp mill organochlorine production. (AOX is a means of measuring chlorine content in pulp mill effluents.)

In addition, NWRI has developed several new analytical methodologies over the past year, including:

- a method for determining dibenzofuran and dibenzo-*p*-dioxin in defoamers (published by Environment Canada's Commercial Chemicals Branch);
- a radioimmunoassay for detecting polychlorinated dibenzo-*p*-dioxins; and
- an extraction technique for polychlorinated dibenzo-*p*-dioxins from municipal incineration fly ash.

In support of toxic chemical assessments and monitoring, the Institute participates in various quality assurance programs. This year, NWRI designed and completed an interlaboratory study on the determination of dioxins and furans in sediment extracts, and two interlaboratory studies on the determination of octachlorostyrene and chlorobenzene in sediments.





To support CEPA quality assurance programs, NWRI developed reference materials on sediments for octachlorostyrene, chlorobenzene, dioxin and furan.

Finally, NWRI is taking the lead in assessing certain chemicals on the Priority Substances List: organotin compounds, chromium and its compounds, nickel and its compounds, and aromatic amines. The Institute is also contributing to the assessment of numerous other chemicals on the Priority Substances List.

## *Canadian Wildlife Service*

The Canadian Wildlife Service (CWS) conducts CEPA research and monitoring at the National Wildlife Research Centre and regional offices. By detecting and measuring the effects of toxic substances on wildlife, researchers can assess the overall health of species, predict the impact of pollutants, and provide an early warning system for potential environmental and human health problems.

CWS has been involved in several major projects over the past year, including:

- an examination of how organochlorines affect such parameters as reproductive success in top predators of the Arctic food chain;
- a study to examine how levels of contaminants fluctuate in seabirds in many parts of Canada;
- a project to determine where, in Canada, waterfowl might be exposed to higher levels of lead; and
- a study concluding that contaminants produced by tire fires do not accumulate in wildlife to levels known to cause toxic effects (based on available data).

Monitoring of contaminant levels in seabird eggs over two decades has identified which chemicals are on the rise and fall in the marine environment, and this research has led to investigations of potential contaminant sources. Environment Canada is using the information gathered by monitoring seabirds, and, more recently, shorebirds and waterfowl, in Priority Substances List assessments.

## *National Toxicology Network*

The National Toxicology Network will complement CEPA when it is developed in the upcoming year. The goals of the network are to share resources and information, and to provide relevant, timely and credible data and advice on toxicological issues. Scientists at universities and research centres across Canada will form a core of expertise in key areas of toxicological research.

The network has received \$14 million in new resources under the Green Plan initiative "Keeping Toxics Out of the Environment."

## *Publishing Results*

CEPA provides for the continued collection, processing, correlation and publication of results as part of its research and monitoring mandate.







Documents released over the past year to support environmental regulations and guidelines include:

- *Reference Method for the Determination of Adsorbable Organic Halogens (AOX) in Waters and Wastewaters*  
Wastewater Technology Centre, Environmental Protection  
Conservation and Protection (EPS 1/RM/16; ISBN 0-662-58702-2)
- *Biological Test Method: Test of Reproduction and Survival Using the Cladoceran Ceriodaphnia dubia*, Environmental Protection  
Conservation and Protection (EPS 1/RM/21; ISBN 0-662-19396-2)
- *Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows*, Environmental Protection  
Conservation and Protection (EPS 1/RM/22; ISBN 0-662-19397-0)
- *Priority Substances List, Assessment Report No. 2, Effluents from Pulp Mills Using Bleaching*, Environment Canada and  
Health and Welfare Canada (ISBN 0-662-18734-2)
- *Reference Method for the Determination of Polychlorinated Dibenzo-para-dioxins and Polychlorinated Dibenzofurans in Pulp and Paper Mill Effluents*, River Road Environmental Technology Centre  
Environmental Protection, Conservation and Protection  
(EPS 1/RM/19; ISBN 0-662-19450-0)
- *Reference Method for the Determination of Dibenzofuran and Dibenzo-p-dioxin in Defoamers*, Commercial Chemicals Branch  
Environmental Protection, Conservation and Protection  
(EPS 1/RM/20; ISBN 0-662-58518-6)
- *Reference Method for Source Testing: Measurement of Releases of Total Reduced Sulphur Compounds (TRS) from Pulp and Paper Operations*  
River Road Environmental Technology Centre  
Environmental Protection, Conservation and Protection  
(EPS 1/RM/6; ISBN 0-662-58703-0)
- *The State of Canada's Environment*, SOE Reporting (ISBN: 0-660-14237-6)
- *Canada's Environment Today*, SOE Reporting (ISBN: 0-662-19515-9)
- *Understanding Atmospheric Change*  
AES, SOE Reporting (SOE Report No. 91-2 ISBN: 0-662-18687-7)
- *Environmental Information Statement*  
Environmental Information Forum Secretariat, SOE Reporting
- *Proceedings: Environmental Information Forum*  
Environmental Information Forum Secretariat, SOE Reporting  
(ISBN: 0-662-19338-5)

Many CEPA-related reports are listed in *Environmental Protection Publications*, available from Environment Canada's Enquiry Centre (1-800-668-6767).

Three other sources for CEPA publications are:

the Canadian Wildlife Service at  
(819) 997-1095

the Ecosystem, Science and  
Evaluation Directorate at  
(819) 997-2601

Health and Welfare Canada's  
Environmental Health  
Directorate at (613) 954-0291





## State of the Environment

CEPA requires the federal government to report to Canadians on overall environmental conditions and trends, known as the "state of the environment." State of the environment reports present credible, science-based information to describe how our activities affect the environment, and, in turn, our health, ecological systems and the economy.

Environment Canada's State of the Environment (SOE) Reporting Section deals specifically with this subject. Its guiding principles are to:

- make diverse audiences more aware of the state of the environment;
- identify and anticipate changes in the environment early enough to consider alternative actions; and
- improve decision-making and encourage sustainable use of the environment and natural resources.

In keeping with its plan to produce a comprehensive national report on a periodic basis, SOE Reporting released *The State of Canada's Environment* in April 1992. This sweeping examination of Canada's environment is the culmination of four years of intensive effort by experts from universities, industry, environmental organizations, the provinces, federal government departments, and other stakeholders. SOE Reporting also published a companion document, *Canada's Environment Today*, which features highlights from the report. Newsletters, fact sheets and reports are produced on an ongoing basis.

## Global Reporting

In the spring of 1991, SOE Reporting worked with the UN Environment Programme, the Organization for Economic Cooperation and Development, the World Resources Institute, the International Chamber of Commerce, the World Environment Centre and several federal agencies to host a conference in Montreal. There, experts from 38 countries and 22 international organizations discussed ways of improving information on the environment.

As a result of this meeting, organizers produced the document, *Proceedings: Environmental Information Forum*. The discussions also prompted countries and organizations to improve their own SOE reporting and to share information, so that researchers and policy-makers will have a better picture of the global environment.

The conference's conclusions, summed up in the document *Environmental Information Statement*, were tabled at the G-7 Economic Summit. They were also used to shape the environmental information section of *Agenda 21*, a document produced in June 1992 at the United Nations Conference on Environment and Development in Brazil.

In 1992-93, Canada will continue to advance international SOE reporting through the development of indicators, and the analysis of trade-environment relationships. Work will also focus on the development of consistent and compatible SOE reporting in a North American context.







## *Developing an Environmental Network*

SOE Reporting is currently developing an "Environmental Information Network" for Canadian decision-makers. The network will be computer-based and electronically accessed. Initially, it will meet the needs of SOE Reporting. A second phase will make it available to Canadians.

## *Task Force Recommends Ecological Monitoring*

In 1991-92, Environment Canada asked a task force to examine the effectiveness of environmental monitoring and assessment within the Department. One of their recommendations was that the Department create a national ecological monitoring and assessment network, one that would provide SOE information and early warnings of emerging problems. Acting on this suggestion, SOE Reporting initiated a series of regional workshops and co-hosted a federal workshop to explore the network concept.

## *Improving Environmental Indicators*

"Environmental indicators" will help the government meet its Green Plan commitment of providing accurate, timely and accessible environmental information to the public.

The preliminary national set of environmental indicators, released last year, is serving as the basis for additional, more widely based consultations with key stakeholders to improve and augment the set.

Several agreements to share indicator development have been reached with other federal agencies. At a November 1991 workshop sponsored by the Canadian Council of Ministers of the Environment, participants identified a common set of environmental indicators that could be harmonized across all federal, provincial and territorial jurisdictions. A pilot project, completed in February 1992, obtained the response of Canadian business to the preliminary national set.

## *Non-regulatory Instruments*

CEPA Part I, particularly Section 8, gives the federal government responsibility for a wide range of non-regulatory actions.

Researchers are devoting considerable effort to developing guidelines and codes of practice to give industries and regulators clear directions on how to reduce emissions, effluents and wastes. Recent examples include the "Thermal Power Generation Emissions: National Guidelines for New Stationary Sources," revised in early 1992; and "Environmental Codes of Practice for Steam Electric Power Generation (Operational and Decommissioning Phases)," to be released in the summer of 1992.





## *Cleaning up Contaminated Sites*

The Canadian Council of Ministers of the Environment (CCME) initiated the National Contaminated Sites Remediation Program in 1989. Since then, Environment Canada, the CCME, and the interested public have been working together to deal with the threat posed to the environment and human health by contaminated sites in Canada.

Through this program, the federal government has initiated joint projects in all provinces and territories with the exception of Manitoba and Saskatchewan.

The federal government, working in partnership with the provincial and territorial governments to clean up orphan high-risk contaminated sites, has developed national criteria and procedures to classify, assess and remediate contaminated sites in Canada.

In 1991, Environment Canada published, in cooperation with the CCME, the *Interim Canadian Environmental Quality Criteria for Contaminated Sites*. The federal government will work with CCME members to update the environmental quality criteria as new information becomes available.

Over the next year, Environment Canada and its partners in the National Contaminated Sites Remediation Program will publish a protocol for developing further environmental quality criteria. In addition, Environment Canada will provide direction on ecological risk assessments and remediation objectives, based on specific conditions that may be encountered at high-risk contaminated sites in Canada.

## *Reducing CFC Emissions from Refrigeration and Air Conditioning*

In May 1991, Environment Canada released the "Code of Practice for the Reduction of CFC Emissions from Refrigeration and Air Conditioning Systems." It outlines how to reduce CFCs, and to the extent possible, HFCs and HCFCs in residential, commercial and industrial refrigeration units, heat pumps, and air conditioning. In conjunction with this new code of practice, the Department is developing training programs for technicians that work with refrigeration and air conditioning units.

## *Environmental Quality Guidelines*

Section 8 gives the Minister the authority to formulate environmental quality guidelines and objectives.

In 1991-92, Environment Canada and the Canadian Council of Ministers of the Environment collaborated on supplements to the Canadian Water Quality Guidelines on halogenated methanes and organotins—both priority substances.

At the same time, work continued on water quality guidelines for the following priority substances: tetrachloroethylene, phthalate esters, styrene, anilines, methyl tertiary-butyl ether, polycyclic aromatic hydrocarbons and receiving waters of effluents from pulp and paper mills that use bleaching.







The guidelines will describe the conditions necessary to safeguard aquatic life; as well as to protect the water supplied to municipalities, and to rural communities for livestock watering and irrigation. They will also form the basis for assessments and control measures.

In a related project, scientists worked on developing tissue residue guidelines for toxic substances in fish, animals and birds that eat freshwater life.

Work also continued on Canadian Marine Environmental Quality Guidelines for coastal and estuarine waters. These guidelines are used to help determine acceptable ocean dumping limits, to assess environmental quality at a particular site, or to establish site remediation goals (in the case of a contaminated area).

In addition, scientists began to develop marine water quality guidelines for dissolved oxygen, salinity, aesthetics, bacterial contamination, litter, pH, and suspended solids; and they set guidelines for tributyltin. The data base on effects of sediment-associated contamination was substantially expanded in 1991-92. As well, work went forward on a method for deriving scientifically defensible sediment quality guidelines, and began on guidelines for dioxins and furans in sediment.

## *The Environmental Choice Program*



Non-regulatory incentives can be effective in encouraging business and consumers alike to make environmentally sound decisions.

A very important strategy is the Environmental Choice Program, funded by Green Plan resources and licensing revenues. It is voluntary and consumer-driven. The idea behind the program is that the more Canadians are aware of environmental issues, the more they will make purchasing decisions that favour the environment.

Consumers can do this by looking for the EcoLogo, an official government mark. Goods and services with this logo have met the Environmental Choice criteria set by an independent body appointed by the Minister. Manufacturers may apply to have their products evaluated against the criteria, and if their product or service is accepted, they will receive a license to use the EcoLogo symbol.

By the end of March 1992, the Environmental Choice Program had finalized 19 guidelines for the following products:

- re-refined lubricating oil;
- insulation from recycled wood-based cellulose fibre;
- products made from recycled plastic;
- zinc-air batteries;
- water-based paint;
- fine paper from recycled paper;
- hobby craft forms from recycled paper;
- newsprint from recycled paper;
- heat-recovery ventilators;
- reusable cloth diapers;
- solvent-based paint;





- ethanol-blended gasoline;
- composting systems;
- reusable shopping bags;
- diaper services;
- non-rechargeable batteries;
- energy-efficient lamps;
- water-conserving products; and
- large appliances.

More than 650 products from 120 companies have already been licensed with the EcoLogo, and guidelines for many other products are now under development.

### *Advisory Committee on Environmental Protection*

In support of the Green Plan goal to promote "Environmentally Responsible Decision-Making," Environment Canada and Industry, Science and Technology Canada (ISTC) created the Advisory Committee on Environmental Protection.

Both Departments recognize the link between the environment and the economy. The Advisory Committee, comprised of representatives from industry, interest groups, labour associations, universities and research centres, is concerned with achieving sustainable development in Canada. Members will advise the government on which regulatory and non-regulatory measures should be developed to balance the goals of industrial competitiveness and a clean environment.

### *National Office of Pollution Prevention*

The National Office of Pollution Prevention, established in July 1991, promotes and integrates government and industry initiatives in pollution prevention. In emphasizing prevention, the office encourages clean products and processes, innovative technology, and improved management practices. One of the office's major tasks is the management of the Accelerated Reduction and Elimination of Toxics (ARET) project. It was created in 1991 to expedite the reduction or elimination of toxic substances, particularly those that are persistent and bio-accumulative.

ARET complements ongoing regulatory and compliance activities under CEPA, and will enhance industrial competitiveness through improved efficiency.

### *Great Lakes/St. Lawrence Pollution Prevention*

To accelerate the reduction of persistent toxic chemicals, Environment Canada has introduced the Great Lakes/St. Lawrence Pollution Prevention Initiative. The idea behind this initiative is to promote pollution prevention—stopping pollution at the source, before it starts—through a mix of education, information exchange and demonstration projects.







Now in its second year, the Pollution Prevention Initiative has received \$25 million in funding from the Green Plan.

Environment Canada will open the Great Lakes Pollution Prevention Centre in 1992. Located in Sarnia, it will be an important resource centre to those who work and live in the Great Lakes basin area.

The St. Lawrence Centre in Montreal, established in 1988, has been expanded to play a similar role for the St. Lawrence River basin.

Both centres are designed to be focus points for the latest information on effective, cost-efficient prevention strategies to ensure that communities around the Great Lakes and St. Lawrence basin do not repeat past mistakes. The automobile manufacturing industry and municipalities are among current priorities.

In addition, the bi-national "Lake Superior Action Plan" has been created under the Initiative, to help protect this relatively pristine body of water.

## *Private-Sector Initiatives*

Pollution prevention is not restricted to government—several Canadian companies are demonstrating international leadership by committing themselves to the goal of virtual elimination of toxic discharges from their manufacturing operations. The Canadian Chemical Producers' Association's Responsible Care Program, for instance, is an industry-led initiative directed towards the better management of chemicals. The program is supported by six codes of practice that deal with the entire life cycle of chemical production.

Northern Telecom is one of several Canadian companies that has decided to develop its own environmental objectives. Taking the lead from the Montreal Protocol, which Canada signed in 1987, Northern Telecom set a goal for the elimination of CFCs from its production process by the end of 1991. It met its target by inventing new technology, and estimates that this move will prevent the emission of 9000 tonnes of CFCs by the year 2000. The company is also offering its technology to developing countries at no charge.

Many progressive businesses and industry associations are using non-regulatory measures to meet the increasing demand in the marketplace for environmental products, services and manufacturing processes.





## *CEPA Part II: Regulating Toxic Substances*

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Part II of CEPA focuses on the regulation of toxic substances. Environment Canada has developed comprehensive inventories as a way of classifying thousands of substances.

- All chemicals known to be in use in Canada form the **Domestic Substances List**.
- Those that are not used in Canada, but are used elsewhere, form the **Non-domestic Substances List**.
- Following recommendations of a Ministerial Advisory Panel, 44 chemical substances, currently in use in Canada, were selected for inclusion on the **Priority Substances List** in 1988-89.

### *The Priority Substances List*

The substances on the Priority Substances List are ones that the Ministers of the Environment and Health and Welfare have given priority in assessing whether they are toxic, or capable of becoming toxic, as defined under Section 11 of CEPA.

According to CEPA, a substance is toxic if it is entering, or may enter, the environment in a quantity, or concentration, or under conditions:

- having, or that may have, an immediate or long-term harmful effect on the environment;
- constituting, or that may constitute, a danger to the environment on which human life depends; or
- constituting, or that may constitute, a danger in Canada to human life or health.

About one third of the substances on the list are families of chemicals or effluents, some of which may comprise up to several hundred substances.

The Priority Substances List will be expanded to 100 substances to be assessed by the year 2000, thanks to \$95 million in additional resources under the Green Plan initiative "Keeping Toxics Out of the Environment." Under the same initiative, an additional \$44 million will support CEPA activities carried out by Fisheries and Oceans Canada.

### *Assessing Priority Substances*

Priority substances task groups, appointed by Environment Canada and Health and Welfare Canada, are pressing toward a 1994 deadline to complete scientific assessments on all 44 substances. When an assessment concludes that a substance is toxic under CEPA, the government develops a Control Option Report.

Two sets of regulations that will come into force in 1992 are a direct result of completed assessments. Scientific assessments of dioxins, furans and pulp mill effluents led to the Pulp and Paper Mill Defoamer







and Wood Chips Regulations and Chlorinated Dioxins and Furans Release in Pulp and Paper Mill Effluents Regulations.

CEPA Annual Report 1990-91 indicated that the assessment process was behind schedule. Over the past year, an improved project management approach has been implemented, and work is progressing steadily. The timetable for the Priority Substances List Assessment Reports is as follows:

*Assessment Reports Completed*

Polychlorinated Dibenzodioxins  
Polychlorinated Dibenzofurans  
Effluents from Pulp Mills  
Using Bleaching

*Reports to be Completed in 1992-93*

Monochlorobenzene  
Toluene  
Methyl Tertiary-Butyl Ether  
Benzene  
Arsenic  
Hexachlorobenzene  
1,1,1-Trichloroethane  
Trichlorobenzene  
Tetrachloroethylene  
Chlorinated Wastewater Effluents  
Creosote-Impregnated Wastes  
Waste Crankcase Oils  
bis (2-Chloroethyl) Ether  
bis (Chloromethyl) Ether  
Chloromethyl Methyl Ether  
1, 2-Dichlorobenzene  
1, 4-Dichlorobenzene  
Xylenes  
3,5-Dimethylaniline  
Benzidine

*Reports to be Completed in 1993-94*

Methylmethacrylate  
Chlorinated Paraffin Waxes  
Tetrachlorobenzene  
Pentachlorobenzene  
Dibutyl Phthalate  
Di-n-octyl Phthalate  
bis (2-ethyl hexyl) Phthalate  
1, 2-Dichloroethane  
Organotin Compounds  
Dichloromethane  
Polycyclic Aromatic Hydrocarbons  
Inorganic Fluorides  
Cadmium  
Styrene  
Trichloroethylene  
Aniline  
3,3'-Dichlorobenzidine  
1,1,2,2-Tetrachloroethane  
Chromium and its Compounds  
Nickel and its Compounds  
Mineral Fibres





## *Collecting Information*

Sections 16 through 18 of CEPA allow the federal government to collect data and samples concerning the production, applications and importation of substances.

Environment Canada used Section 16 in November 1991 to gather commercial data concerning the trade and use of certain chloroalkyl ethers. This information was analyzed and is currently being incorporated into draft assessment reports on these substances.

### *National Pollutant Release Inventory*

Under the CEPA provisions for collecting information, the government is developing a National Pollutant Release Inventory.

It will help meet the Green Plan goal of "Improving Our Understanding of Toxic Substances and Their Health Risks," more specifically to "Develop a Better Understanding of the Nature and Quantity of Toxic Substances Released in Canada."

An advisory committee is helping the Department in the design of the program. One of the first tasks is to suggest which substances should be included, and which sectors will be required to report releases.

The Canadian inventory will be modelled after the United States Toxic Release Inventory, launched in 1988. Information in the U.S. inventory is based on 85,000 reports from 23,000 manufacturing facilities. Based on the U.S. criteria, Canada might expect to collect about 2,000 reports.

## *Confidentiality Requests*

In some circumstances, a person may submit a written request for confidentiality when providing information on toxic substances (Section 19). Section 20 provides for the non-disclosure of information, subject to certain exceptions, that has been submitted with a request for confidentiality.

## *Disclosing Information*

Information collected under CEPA may be disclosed if it deals with:

- general data on uses of a substance;
- safe handling precautions;
- recommended methods for disposal and elimination of a substance;
- safety measures to be taken in case of accidents involving a substance;
- physical and chemical data that do not reveal the identity of a substance;
- health and safety data;





- occupational exposure studies;
- toxicological, clinical and ecological studies of a substance;
- tests performed under CEPA; and
- test methods and results of product or environmental testing when carried out by, or on behalf of, a government institution, unless it was done for a fee.

In 1991-92, Environment Canada received one request under the *Access to Information Act* for information related to CEPA, however no information was disclosed.

## *The Domestic Substances List*

The Domestic Substances List is an inventory of more than 21,000 substances manufactured in, or imported into Canada on a commercial scale between 1984 and 1986. The first list was published in the January 26, 1991 edition of the *Canada Gazette Part I*. Environment Canada foresees publishing a supplement containing deletions, additions and corrections in October 1992.

This list is the sole basis for determining whether a substance is "existing" or "new" to Canada. Environment Canada relies on it to determine whether substances require pre-notification or assessment before they are manufactured in Canada or are imported into the country.

Substances on this list are considered to be "in use" in Canada and are exempt from CEPA's New Substances provisions. However, existing substances that could cause adverse environmental or health effects are covered by Priority Substances List assessments.

In a new development, Environment Canada plans to include biotechnology products as part of the Domestic Substances List. Canadian manufacturers and importers have been advised about this initiative, and a list of micro-organisms and products of organisms that meet the criteria for inclusion on the Domestic Substances List will be gazetted in the summer of 1993.

## *The Non-domestic Substances List*

The Non-domestic Substances List comprises 41,000 substances known to be commercially available, but not on the Canadian market between 1984 and 1986.

The intent of this list is to recognize substances that are not new to world commerce. The government requires less detailed information for these substances than for those new to Canada and other countries.

As a basis for this list, Environment Canada chose the United States' 1985 Toxic Substances Control Act Inventory. All substances on Canada's Domestic Substances List were deleted from the non-confidential portion of the U.S. inventory to produce the Non-domestic Substances List.





It then appeared in *Canada Gazette Part I* on January 26, 1991, along with the Domestic Substances List. Environment Canada will update this list annually beginning in 1995.

## *New Substances*

Substances that are not on the Domestic Substances List will require notification and assessment before they can be manufactured in or imported into Canada. The notification information required from manufacturers and importers will be prescribed in the Regulations Respecting Notification of Substances New to Canada (New Substances Notification Regulations).

Information requirements for chemicals and polymers include physical, chemical and toxicological data on the substance. Substances on the Non-domestic Substances List, however, will have less onerous notification requirements than other new substances. Regulations for chemicals and polymers are expected to come into force in early 1993 and will mark the beginning of CEPA's New Substances Notification Program.

Recommendations on New Substances Regulations for Biotechnology Products, following public review, included:

- clarifying the scope of the regulations;
- adding biotechnology products to the Domestic Substances List;
- reviewing the information requirements; and
- making regulations "risk based," rather than "stage-of-development based."

Environment Canada has pursued each of these recommendations in collaboration with Health and Welfare Canada. Discussions on the scope of regulations are ongoing with other federal departments; biotechnology substances will be included on the Domestic Substances List; experts are reviewing the environmental and health requirements; and a new approach will be used to develop regulations. Risk will be assessed according to the characteristics of the organism, use and the environment.

Environment Canada is planning a new round of consultations on a revised version for the fall of 1992, and will publish final regulations in 1993.

## *Creating Regulations*

CEPA regulations pass through many stages before they finally have the force of law, allowing time for public comment and close examination of their implications.

Regulations typically begin with an assessment report, establishing a scientific basis for control. The government considers a number of options before pursuing regulations, but where regulations are the preferred course of action, draft versions are developed and, following public consultation, are sent to a Cabinet committee.





Proposed regulations appear in the *Canada Gazette Part I*, together with a Regulatory Impact Analysis Statement. Following a 60-day period set aside for public comment, the government finalizes the regulations. After regulations come into force, they appear in the *Canada Gazette Part II*. For hazards that must be acted upon immediately, the government may issue interim orders.

## *Immediate Action through Interim Orders*

When a substance is believed to be toxic, or when a substance specified on the List of Toxic Substances is not adequately regulated and represents a significant danger to the environment or to human life or health, CEPA gives the Minister of the Environment, with the concurrence of the Minister of Health and Welfare, the authority to take immediate action in the form of an interim order (CEPA Section 35).

Interim orders typically develop into regulations, as was the case with the following, issued since CEPA came into force in 1988:

- Contaminated Fuel Interim Order
- Asbestos Mines and Mills Release Interim Order
- Chlor-alkali Mercury Release Interim Order
- Chlorobiphenyls Interim Order
- Chlorofluorocarbon Interim Order
- Mirex Interim Order
- Polychlorinated Terphenyl Interim Order
- Release of Lead from Secondary Lead Smelters Interim Order
- Vinyl Chloride Release Interim Order
- Polybrominated Biphenyls Interim Order

The only remaining interim order, the Storage of PCB Wastes Interim Order, is expected to become a regulation in 1992.







## *CEPA Regulations and Interim Orders*

### *Regulation*

### *Publication in Canada Gazette Part II*

|                                                                                                                         |                |
|-------------------------------------------------------------------------------------------------------------------------|----------------|
| Contaminated Fuel Regulations                                                                                           | August 1991    |
| Chlorobiphenyls Regulations<br>(rollover to CEPA from the <i>Environmental Contaminants Act</i> )                       | March 1991     |
| Secondary Lead Smelter Release Regulations<br>(rollover to CEPA from the <i>Clean Air Act</i> )                         | March 1991     |
| Ozone-Depleting Substances Regulations No. 2<br>(freeze consumption of halons)                                          | September 1990 |
| Ozone-Depleting Substances Regulations No. 3<br>(prohibit certain uses of CFCs and halons)                              | September 1990 |
| PCB Waste Export Regulations                                                                                            | August 1990    |
| Asbestos Mines and Mills Release Regulations<br>(rollover to CEPA from the <i>Clean Air Act</i> )                       | July 1990      |
| Gasoline Regulations                                                                                                    | May 1990       |
| Vinyl Chloride Release Regulations<br>(rollover to CEPA)                                                                | February 1990  |
| Chlor-Alkali Mercury Release Regulations<br>(rollover to CEPA)                                                          | February 1990  |
| Mirex Regulations<br>(rollover to CEPA)                                                                                 | February 1990  |
| Polychlorinated Terphenyl Regulations<br>(rollover to CEPA)                                                             | February 1990  |
| Chlorofluorocarbon Regulations<br>(rollover to CEPA)                                                                    | February 1990  |
| Polybrominated Biphenyl Regulations<br>(rollover to CEPA)                                                               | February 1990  |
| Federal Mobile PCB Treatment and Destruction Regulations                                                                | January 1990   |
| Phosphorus Concentration Regulations<br>(rollover to CEPA)                                                              | November 1989  |
| Ocean Dumping Regulations<br>(rollover to CEPA)                                                                         | November 1989  |
| Ozone-Depleting Substances Regulations No. 1<br>(reduce consumption of CFCs)                                            | July 1989      |
| Fuels Information Regulations No. 1<br>(continue to be in force under CEPA; previously under the <i>Clean Air Act</i> ) | August 1977    |

### *Interim Order*

### *Issued*

|                                     |                |
|-------------------------------------|----------------|
| Storage of PCB Wastes Interim Order | September 1990 |
|-------------------------------------|----------------|







## *Recently Developed Regulations*

Nineteen regulations and one interim order are currently in place under CEPA. Over the past year, the Department brought the Contaminated Fuel Regulations into force, and continued work on several other regulatory initiatives.

### *Contaminated Fuel Regulations*

The government published the Contaminated Fuel Regulations in August 1991 to replace the Contaminated Fuel Interim Order. The Minister of the Environment had issued the Interim Order in 1989 to address the problem of illegal shipments of fuels contaminated with hazardous wastes from the United States.

Since the interim order came into force, Environment Canada has conducted more than 1,000 inspections. While no contaminated fuels have ever been found, spot checks continue.

### *Chlorobiphenyls Regulations*

These regulations, once part of the *Environmental Contaminants Act*, were introduced under CEPA in March 1991. They prohibit the manufacture, sale or importation of chlorobiphenyls for certain commercial, manufacturing or processing uses; determine maximum concentrations in products; and specify maximum quantities and concentrations that may be released into the environment.

### *Release of Lead from Secondary Lead Smelter Regulations and Asbestos Mines and Mills Release Regulations*

Secondary Lead Smelter Release Regulations limit the concentration of lead emitted into the air by secondary lead smelters; and the Asbestos Mines and Mills Release Regulations limit the concentration of asbestos fibres emitted into the air at mines and mills. Both sets of regulations contain requirements on plant malfunctions, emissions testing and reporting.

### *PCB Waste Export Regulations*

Effective August 1990, Canada banned the export of PCB waste to all countries except to the United States. Environment Canada is planning a detailed training program on these regulations for its inspectors in 1992.

### *Gasoline Regulations*

The Gasoline Regulations, which came into force in December 1990, have significantly reduced the level of lead particles in the air.





Lead is potentially toxic in most, if not all, of its chemical and physical forms. In urban Canada, lead additives in gasoline have been the largest single source of lead in the atmosphere.

The new regulations prohibit the use of leaded gasoline in most vehicles, including automobiles. While leaded gasoline may still be used in engines designed to run on leaded gasoline, and to power farm machinery, boats, and trucks that weigh more than 3,856 kilograms, the concentration of lead may not, on average, be greater than 26 milligrams per litre of gasoline.

## *Ozone-Depleting Substances Regulations*

### *The Montreal Protocol*

Canada joined 24 nations in signing the United Nations Environmental Programme Montreal Protocol on Substances that Deplete the Ozone Layer in September 1987. Today, 80 countries have signed the Protocol. The signatories recognized that CFCs and halons deplete the atmosphere's ozone layer. By implementing domestic regulations to control these substances, they are working together to prevent a global environmental and health crisis.

In 1990, the Montreal Protocol was amended to accelerate the phase-out schedule for CFCs and halons to the year 2000, to add methyl chloroform and carbon tetrachloride to the list of controlled substances, and to create financial assistance mechanisms for helping developing countries to phase out ozone-depleting substances.

### *Domestic Regulations to Support International Commitments*

The Green Plan will contribute \$25 million in additional resources to Canadian efforts targeting ozone depletion.

Three Ozone-Depleting Substances Regulations are currently in place: the first deals with CFCs; the second aims to freeze the consumption of halons at 1986 levels in upcoming years; and the third prohibits certain uses of CFCs in small cans of refrigerant, food packaging foam, party streamers, fog horns and most aerosols.

In March 1992, Canada announced its intent to further accelerate its own phase-out schedule. The import of halons will be phased out by December 31, 1994, and the production and import of CFCs will be eliminated by December 31, 1995.

To meet the accelerated schedules for CFCs and halons, Environment Canada will amend the first and second set of regulations. The Department is also looking at the viability of amending the third set of regulations to prohibit the use of CFCs for rigid and flexible foams, hospital sterilants, solvents, cleaning products and car air conditioners (for vehicles manufactured from September 1994 on).





## *Timetable of Planned Regulations*

### *Regulatory Initiative and Expected Year of Publication in Canada Gazette Part II*

#### *1992*

Pulp and Paper Mill Defoamer and Wood Chips Regulations  
Chlorinated Dioxins and Furans Release in Pulp and Paper Mill Effluents Regulations  
Toxic Substances Export Notification Regulations  
Export and Import of Hazardous Wastes Regulations  
Storage of PCB Materials Regulations  
Vinyl Chloride Release Regulations, Amendments

#### *1992-93*

Administrative Rules for Environmental Protection Boards of Review  
Ozone-Depleting Substances Regulations No. 4 (methyl chloroform and carbon tetrachloride)  
New Substances Notification Regulations for Polymers  
New Substances Notification Regulations for Chemicals  
PCB (Chlorobiphenyl) Regulations, Amendments  
Ocean Dumping Regulations, Amendments Phase I

#### *1993-94*

Release of Lead from Secondary Lead Smelters, Amendments  
Confidential Information Disclosure Regulations  
New Substances Notification Regulations for Biotechnology Products  
Ozone-Depleting Substances Regs. No. 1, Amendments (reduce CFC consumption 100% by 1996)  
Ozone-Depleting Substances Regs. No. 2, Amendments (reduce halon consumption 100% by 1995)

#### *1994-95*

Fines and Execution of Orders Proceeds Regulations

#### *Under Review*

Air Emissions Regulations for Boilers at Federal Facilities  
Diesel Quality Regulations (sulphur content in diesel fuel)  
Ozone-Depleting Substances Regs. No. 3, Amendments (ban halons in fire extinguishers)  
Non-hazardous Solid Waste Incinerators at Federal Facilities  
Ozone-Depleting Substances Regs. No. 3, Amendments (prohibit CFCs in certain products)

#### *Unscheduled*

Contingency Planning at Federal Facilities  
Hazardous Waste Management at Federal Facilities  
Landfill Operations and Management at Federal Facilities  
Ocean Dumping Regulations, Amendments Phase II  
Spill Reporting  
Wastewater Regulations for Federal Facilities





Over the past year, Environment Canada conducted "Special Enforcement Operation on CFC-12," a national initiative to ensure compliance with Regulations No. 1 and No. 3. The program is described in the Enforcement and Compliance section of this report.

In concordance with the carbon tetrachloride and methyl chloroform amendments to the Montreal Protocol, Environment Canada is developing a fourth set of Ozone-Depleting Substances Regulations that will eliminate the use of these substances in Canada.

## *Release of Toxic Substances*

The dangers posed by the release of toxic substances into the ecosystem are addressed in Sections 36 through 38. CEPA provides for reporting and precautionary measures, including the notification of inspectors by any member of the public who may be adversely affected by the impending threat. Over the past year, Environment Canada did not receive any voluntary reports.

In January 1992, the Environmental Emergencies Branch published a reference guide to current spill reporting legislation at the federal and provincial levels, *The Consolidation of Canadian Spill Reporting Provisions*. Copies of this report may be obtained by phoning the Branch's Prevention Division at (613) 941-0792.

## *Recovery of Reasonable Costs*

CEPA makes provisions for the recovery of costs when the Department must step in to control the release of toxic substances. Under Sections 39 and 77, when polluters fail to take preventive measures to correct their contravention of a CEPA regulation or interim order, the federal government may take action and reclaim expenses. Environment Canada has not yet had reason to invoke these Sections.

## *Export and Import of Hazardous Wastes*

Section 43 of CEPA defines the term "hazardous waste" and gives the Minister of the Environment the authority to:

- compile a list of hazardous wastes requiring export and import notification;
- develop a list of hazardous waste authorities to which notification should be given; and
- set regulations governing the form of the notice.

Section 45 authorizes the development of regulations to prescribe conditions under which hazardous wastes may be exported and imported.

This past year, a task force resolved the issue of controls for hazardous recyclables. The task force proposed a three-tier control system, based on an international scheme developed by the Organization for Economic Cooperation and Development.







## *The Basel Convention*

On May 5, 1992, The Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal came into force, and Canada will introduce regulations to conform with it.

The key objectives of the Basel Convention are to:

- reduce the generation of hazardous waste;
- dispose of hazardous waste in the country of generation, where possible;
- establish better controls on hazardous waste exports and imports;
- prohibit imports and exports to countries lacking the legal, administrative and technical capacity to manage and dispose of hazardous waste in an environmentally sound manner; and
- encourage the exchange of information, technology transfer, and the harmonization of standards, guidelines and codes.

In addition, the Basel Convention supports the continued application of compatible bilateral agreements, such as the Canada-United States Agreement on the Transboundary Movement of Hazardous Wastes. This Agreement governs the majority of Canadian hazardous waste shipments between Canada and the United States.

With the goal of bringing in the Export and Import of Hazardous Wastes Regulations by the fall of 1992, Environment Canada is planning a detailed training program for its inspectors.





## *CEPA Part III: Nutrients*

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Sections 49 to 51 define and help to regulate cleaning agents, nutrients and water conditioners.

Over the past year, Environment Canada conducted 36 inspections, and pursued one prosecution under the Phosphorus Concentration Regulations, the only set of regulations under CEPA Part III.

It is interesting to note that in the Atlantic Region, where inspectors have been testing compliance with these regulations for some time, they report that no violations have been recorded or observed during recent years. Analyses of laundry detergents from three companies in Atlantic Region support this trend. Test results for 1991-92, concluded by Environmental Protection's laboratory in Dartmouth, Nova Scotia, showed that all samples contained less than the regulated limit of five per cent phosphorous pentoxide.

## *CEPA Part IV: Controls on Government Organizations*

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Part IV of CEPA gives the Minister of the Environment the authority to regulate waste handling and disposal practices, and emissions and effluents from activities of federal departments, Crown corporations and federal agencies. It gives the Minister the authority to make regulations and guidelines that apply to federal lands, works and undertakings where no other Act of Parliament applies.

Environment Canada will prepare guidelines for underground storage tanks in 1992.

Regulatory initiatives are planned for the following in 1993:

- air emissions at federal boilers;
- municipal-type incinerators; and
- hazardous wastes.

Agriculture Canada, the Department of National Defence and Transport Canada have signed Memoranda of Intent with Environment Canada to participate as property custodians in the Federal Sites Component of the National Contaminated Sites Remediation Program. In the first year, they assessed 16 properties.







## *CEPA Part V: International Air Pollution*

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CEPA Part V governs domestic sources of international air pollution. The Minister of the Environment may regulate sources of pollution that violate international agreements or create air pollution in other countries. This authority can be exercised only if provinces neglect to control the sources of pollution, and so far has not been necessary because provinces have responded effectively.

### *Sulphur Dioxide Protocol*

Provincial actions to control sulphur dioxide emissions will allow Canada to meet the obligations in the 1985 United Nations Economic Commission for Europe's Sulphur Dioxide Protocol. Bilateral agreements reached in 1987-88 between the federal government and each of the seven eastern provinces, combined with effective provincial programs in western Canada, should lead to a 30 per cent reduction of national sulphur dioxide emissions from the 1980 level by 1993, as called for in the Protocol.

### *NO<sub>x</sub> and VOCs Protocols*

Canada is dedicated to reducing the transboundary flow of pollutants that cause ground-level ozone. In support of this objective, the government has entered into two international agreements: the Nitrogen Oxides (NO<sub>x</sub>) Protocol and the Volatile Organic Compounds (VOCs) Protocol, reached under the United Nations Economic Commission for Europe.

At a November 1990 meeting of the Canadian Council of Ministers of the Environment, the provinces indicated their support for Canadian ratification, and federal-provincial agreements defining the federal and provincial actions necessary to fulfill the obligations of the Protocols will likely be concluded in 1992-93.

Under the Green Plan, \$30 million will be devoted to the federal government's part in the Federal-Provincial NO<sub>x</sub>/VOCs Management Plan.

### *Canada-United States Air Quality Agreement*

The Canada-United States Air Quality Agreement is a framework for protecting both countries from transboundary air pollution. Essentially, the Agreement codifies what Canada is obligated to do under Part V of CEPA, and what the United States is obligated to do under the international air pollution provisions of its *Clean Air Act*.

Canada will soon have a system in place to control emissions that cause transboundary air pollution. Under the Agreement's assessment notification and mitigation provisions, Canada will notify the United States of emission sources near our border, and may take further action if the sources significantly affect air quality in the United States.





The United States will have a similar system in place for American sources that affect air quality in Canada.

Also as part of the Agreement, Canada is developing a program to help protect pristine areas in the United States along the border from significant deterioration in air quality. In exchange for Canada's Prevention of Significant Air Quality Deterioration and Visibility Program, the United States will extend its current domestic program to protect Canada's pristine areas across the border from American sources of air pollution.

To support domestic developments under the Canada-United States Air Quality Agreement, as well as other actions to confront the acid rain problem, the Green Plan will provide \$30 million in new resources.







## CEPA Part VI: Controlling Substances at Sea

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The government is committed to stringent and effective controls of ocean dumping. CEPA Part VI, formerly the *Ocean Dumping Control Act*, regulates:

- the disposal of all types of material at sea, including destruction at sea by incineration; and
- the loading of wastes on ships, aircraft, platforms, or other man-made structures for disposal at sea.

Through CEPA, the federal government implements the provisions of the London Dumping Convention, and strongly supports a recent resolution by the international parties to ban the ocean disposal of industrial wastes globally by the end of 1995.

Wastes generated by manufacturing or processing operations are considered "industrial wastes." The term does not include inert and uncontaminated organic materials of natural origin. These materials may be dumped as long as they meet permit requirements and do not interfere with other legitimate uses of the sea.

Canada has no plans to allow incineration at sea of hazardous liquid wastes, and supports the London Dumping Convention resolution to re-evaluate incineration at sea with a view to terminating this practice by December 31, 1994.

Canada does not allow dumping of radioactive wastes, and supports the voluntary London Dumping Convention moratorium on this practice. Any decisions regarding permits for sea dumping of radioactive wastes are being held in abeyance pending the outcome of a comprehensive international review of the issue.

### *Permits for Ocean Dumping*

A system of permits and inspections administered by Environment Canada regulates the disposal of substances at sea. Permits are required for all Canadian ships, aircraft, platforms or man-made structures in all marine waters other than the internal waters of other countries.

Similarly, foreign vessels require permits if they wish to dump in Canadian waters. The terms and conditions of permits vary with the type of material to be disposed.

Permits may govern timing, handling, storage, loading, placement at the disposal site, and monitoring requirements.

A company applying for a permit from Environment Canada must first publish a notice of intent in a newspaper in the vicinity of the proposed operation. This is a statement outlining what is to be discarded and the locations of loading and dumping. The company then submits this published announcement with a permit application. A notice of intent allows interested people to express their concerns, and have them addressed, before Environment Canada assesses an application. In addition, all dumping permits and their amendments must appear in the *Canada Gazette* before they are issued.





The Department will not issue a permit if the disposal is already prohibited under any other Act of Parliament, or if the company does not hold a license or permit required under any Act. This is a way of ensuring that a comprehensive approach to waste management is taken.

Environment Canada considers a number of factors before granting a permit, including:

- alternatives to ocean disposal;
- human health risks;
- potential environmental impacts;
- hazards, including accidents associated with the treatment;
- economics, including energy costs; and
- conflicts with other legitimate uses of the sea.

The Department often uses physical, chemical and biological tests to determine the potential danger of a substance. A material that fails these tests cannot be disposed of at sea in an unconfined site.

Environment Canada staff regularly monitor dump sites for which they have issued permits. Monitoring verifies compliance with the terms of permits.

### *Permits Granted*

Over the past year, Environment Canada issued 225 permits for an estimated total of 5.8 million metric tonnes (t) of material. It is important to note that the total quantities permitted may exceed the total quantities actually disposed.

Almost 38 per cent of the permits were for the disposal of dredged material such as rocks, gravel, sand, silt, clay and wood wastes. The number of dredging permits increased slightly from 77 in the previous year, to 86 in 1991-92. However, the volume of material decreased from 5.7 million t in 1990-91 to 4.8 million t in 1991-92. The quantities of dredged material approved for dumping fluctuate each year due to variations in the number of dredging projects exceeding 100,000 m<sup>3</sup>.

Another 56 per cent of the permits covered the disposal of fisheries waste, including offal, shells, herring waste and fish processing waste water or "stick water." Still, fisheries waste accounted for only two per cent of the total quantity permitted, amounting to about 0.14 million t.

Excavation material such as soils and rocks accounted for two per cent of the number of permits, but made up about 0.9 million t or 14.8 per cent of the total quantity.

Other permits, including seven for vessels, two for concrete blocks, and one for gypsum wallboard, accounted for 4.4 per cent of all permits and 0.2 per cent (10,445 t) of the total quantity permitted. The tables on the following page provide national and regional statistics.





## *Ocean Dumping Permits: National Overview (1991-92)*

| <i>Material</i>     | <i>Number of Permits</i> | <i>% of Total Permits</i> | <i>Volume Permitted</i>                       | <i>% of Total Volume</i> |
|---------------------|--------------------------|---------------------------|-----------------------------------------------|--------------------------|
| Dredged Material    | 86                       | 38                        | (3,715,700 m <sup>3</sup> )<br>or 4,830,410 t | 82.7                     |
| Fisheries Waste     | 125                      | 56                        | 137,247 t                                     | 2.4                      |
| Excavation Material | 4                        | 2                         | 864,500 t                                     | 14.8                     |
| Vessels             | 7                        | 3                         | 1,345 t                                       | less than .1             |
| Gypsum Wallboard    | 1                        | less than 1               | 6,500 t                                       | less than .1             |
| Concrete            | 2                        | less than 1               | 2,100 t                                       | less than .1             |
| <i>Total</i>        | 225                      | 100                       | 5,842,102 t                                   | 100                      |

## *Ocean Dumping Permits by Environment Canada Region (1991-92)*

| <i>Material</i>     | <i>Atlantic<br/>Permits/Volume</i>               | <i>Pacific-Yukon<br/>Permits/Volume</i>          | <i>Quebec<br/>Permits/Volume</i>             | <i>Western-Northern<br/>Permits/Volume</i>  |
|---------------------|--------------------------------------------------|--------------------------------------------------|----------------------------------------------|---------------------------------------------|
| Dredged Material    | 34 (1,255,700 m <sup>3</sup> )<br>or 1,632,410 t | 19 (2,115,000 m <sup>3</sup> )<br>or 2,749,500 t | 29 (194,000 m <sup>3</sup> )<br>or 252,200 t | 4 (151,000 m <sup>3</sup> )<br>or 196,300 t |
| Fisheries Waste     | 124 137,177 t                                    |                                                  | 1 70 t                                       |                                             |
| Excavation Material |                                                  | 4 (665,000 m <sup>3</sup> )<br>or 864,500 t      |                                              |                                             |
| Vessels             | 4 686 t                                          | 3 659 t                                          |                                              |                                             |
| Gypsum Wallboard    |                                                  | 1 6,500 t                                        |                                              |                                             |
| Concrete            | 2 2,100 t                                        |                                                  |                                              |                                             |
| <i>Total</i>        | 164 1,772,373 t                                  | 27 3,621,159 t                                   | 30 252,270 t                                 | 4 196,300 t                                 |

\* Volumes of dredged and excavated materials were converted from m<sup>3</sup> to metric tonnes using an assumed density of 1.3 t/m<sup>3</sup>.

\*\* Fisheries Waste statistics include herring waste, other fish offal, shellfish waste and stick water from fish processing, but not seven "load only" permits issued to control loading methods of herring waste.





### *Permits Screened or Rejected*

This year, 45 applications required additional chemical or biological testing, due to insufficient or outdated information. Atlantic Region conducted 20 additional tests, while Pacific-Yukon Region and Quebec Region pursued 13 and 12 respectively. The results of such tests are usually valid for up to four years, and can provide a basis for future decisions.

Environment Canada rejected nine permits in the past year for various reasons. Two applications in the Atlantic Region showed that dredged material could contain oil in one situation, and PAH, PCB, mercury and oil in another. One dredging application was refused because it would cause silting in a harbour. A fourth application, proposing to dump fish offal, was rejected because the action would violate another Act.

Five more applications were rejected in the Pacific and Yukon Region. Two failed to meet air emission guidelines set by the Canadian Council of Ministers of the Environment. Three applications for dredged material partially failed, which means tests showed that certain sediments were clean, while others were not acceptable for ocean dumping.

### *Projections for Ocean Dumping Activities*

In the next year, Atlantic Region expects no change in the number of dredging permits.

The Quebec and Pacific-Yukon Regions anticipate a moderate increase in maintenance dredging, postponed last year due to the slow economy.

Quebec expects major dredging activities in the channel of La Grande Entrée, Îles-de-la-Madeleine.

The Western and Northern Region anticipates a decrease in dredging applications due to fewer offshore oil and gas activities, and a reduction in government spending. Also in the Western and Northern Region, applications for the disposal of scrap metal could increase as more abandoned sites are cleaned up.

## *Research to Support Ocean Dumping Regulations*

Environment Canada continues to improve the way it evaluates materials intended for dumping. Bioassays are becoming standard assessment tools to measure the effects of potentially contaminated materials on organisms. Researchers have already developed several protocols to assess the quality of effluents, and are now working on standardized protocols for sediments.

Three Canadian ocean dumping bioassays are close to completion, and these tests will examine crustacean mortality, sea urchin reproduction and photoreactive bacteria. In the coming year, researchers will begin work on a bioassay using marine worms to test





for effects on growth. These tests will serve as additional means for screening dredging applications, in conjunction with physical and chemical data.

Researchers are also developing new chemical guidelines for sediments. These effects-based guidelines will allow the Department to set screening levels for contaminants that signify safe, or "no-effect" levels. Ocean dumping would usually be allowed for sediments with contaminants below screening levels. Above screening levels, bioassays would be used. Eventually, Environment Canada will establish rejection levels, or levels above which effects have been demonstrated to occur. Above rejection levels, no ocean dumping would be allowed.

The "Environmental Quality Guidelines" section of this report provides more details on marine guidelines.

## *Ocean Dumping Action Plan*

On November 7, 1991 the Minister of the Environment announced the Ocean Dumping Control Action Plan. This Green Plan initiative will devote \$10 million in additional resources over the next six years to safeguarding the marine environment. Specifically, funds will be directed towards:

- an ocean dumping research fund;
- monitoring programs;
- increased monitoring of ocean disposal sites;
- ways of reducing plastic debris in Canada's oceans;
- creation of environmental quality guidelines; and
- enhanced scientific support.

Already, these resources have accelerated the development of marine environmental quality guidelines and biological assessments.

## *Amendments to the Ocean Dumping Regulations*

In February 1992, Environment Canada began public consultations on amendments to the Ocean Dumping Regulations. The government will publish draft amendments this fall in the *Canada Gazette Part I*. Changes will include an increase in fees for all applicants, including federal departments, and more information requirements on application forms.

Further amendments in upcoming years will strengthen the Ocean Dumping Regulations by incorporating new assessment procedures and standards.





## *CEPA Part VII: General Information*

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### *Notices of Objection and Boards of Review*

The public may file a "notice of objection" to a decision or proposed regulation.

As CEPA is organized by subject areas, guidelines for notices of objection appear in numerous sections of the Act. For example, notices dealing with nutrients are covered in Section 51(2), those related to controls on international air pollution are detailed in Section 62(2), and objections related to ocean dumping permits are addressed in Section 74. Each subject area has its own administrative requirements for notices of objection.

Upon receiving a notice of objection, the Ministers may establish a board of review to examine the complaint. The procedures are set out in Sections 89 to 97 of CEPA. While some notices of objection have been filed under the Act since it first came into force, the federal government has not established any boards of review.

Environment Canada has developed procedural rules to govern matters such as administration, written submission, evidence, confidentiality of documents, public access, conduct of hearings, and reporting. "Administrative Rules for Environmental Protection Boards of Review," to be gazetted in 1992, will give those appearing before a board details on the procedure.

### *Enforcement and Compliance*

To be effective, enforcement must be fair and consistent. In addition, everyone who shares the responsibility for protecting the environment must know what is expected of them—in order to ensure compliance, and to encourage reporting of suspected violations. These are among the guiding principles of Environment Canada's Enforcement and Compliance Policy. Developed in cooperation with the Department of Justice, this policy guides the Department in the implementation of CEPA regulations.

Designated enforcement officers conduct inspections to verify compliance with the regulations. They follow the Enforcement and Compliance Policy, and determine how to respond to a violation by considering, among other things, the nature of the offence, the violator's willingness to comply, and past compliance history.

### *Creation of the Office of Enforcement*

To respond to increasing enforcement demands, and to ensure consistency and uniformity in enforcement actions across the country, Environment Canada created the Office of Enforcement in July 1991.





Some of the responsibilities of this office include:

- providing overall direction for investigations and enforcement actions;
- delivering the annual National Training Program to inspectors and investigators;
- developing courses;
- developing and monitoring the annual National Inspection Plan;
- reviewing new regulations; and
- developing a management information system.

In a recent development, the Office of Enforcement has assumed, in addition to the above responsibilities, functional direction for inspections.

## *Inspections*

Inspectors verify compliance with CEPA and accompanying regulations. Verification might include inspections; sampling substances, effluents and emissions; witnessing compliance tests; checking records, files and other documents required by regulation; and checking the data and reports that have been filed with Environment Canada.

## *Investigations*

Both inspectors and investigators examine cases of suspected violations. When they conclude that a violation has occurred, they take enforcement action, in accordance with the CEPA Enforcement and Compliance Policy.

In 1991-92, enforcement action most commonly consisted of warnings when the degree of harm or potential harm to the environment, human life or health appeared to be minimal.

**Directions** are used when there is an actual or potential release of a substance, in contravention of CEPA regulations. The Act already imposes the obligation to take reasonable emergency measures to remedy any dangerous condition, or to reduce any danger to the environment, human life or health that resulted, or may result, from a release. Inspectors or investigators issue directions when parties owning, managing or controlling the substance fail to take necessary measures.

**Prosecutions** are undertaken when the alleged violation meets the criteria of the CEPA Enforcement and Compliance Policy.

### *Progress in Ticketing Legislation*

This past year, Environment Canada collaborated with the Department of Justice on ticketing legislation—a way of dealing with minor regulatory offences. The Department of Justice reports that 80-85 per cent of those accused for minor offences generally plead guilty and pay their fines. Ticketing, then, would reduce the current burden on the courts.

Environment Canada has now finalized a list of CEPA regulatory offences that could qualify under the statute to enact ticketing, "The Contraventions Act." Offences would involve the failure to follow administrative procedures, such as the proper filing of reports,





submission of data, maintenance of records and the use of certain test procedures. A person or organization receiving a ticket would have the opportunity to:

- plead guilty and pay the fine; or
- plead guilty and request a court hearing to seek a reduced fine or an extended timeframe for paying the fine; or
- plead not guilty and request a court hearing.

"The Contraventions Act" has reached its Second Reading in the House of Commons. Ticketing could be in place as early as 1992-93, or, at the latest, by the 1993-94 fiscal year.

While ticketing would offer another enforcement tool to inspectors, the Department could still bring the above offences before the courts.

### *CEPA Section 108: Applications for Investigations*

Encouraging people to report suspected violations to enforcement officers is one of the guiding principles of CEPA's Enforcement and Compliance Policy.

Section 108 of CEPA states that any two residents of Canada (18 years of age or older), who believe that an offence has been committed under CEPA, may apply to the Minister of the Environment for an investigation of the alleged offence.

Section 108 also sets out the conditions precedent for the investigation of alleged offences. If these conditions are met, Section 109 requires that an investigation take place to determine the facts relating to the alleged offence. The Minister of the Environment must report to the applicants within 90 days on the progress of the investigation and the proposed action.

Procedures have been drafted to respond to such requests, and these should be finalized in 1992-93.

During the past year, one investigation was pursued under Section 108.

## *Uniform Enforcement Guidelines*

Also in 1991-92, Environment Canada began to develop "Uniform Enforcement Guidelines" to define more precisely which enforcement measures are most appropriate for which violations. The guidelines complement the CEPA Enforcement and Compliance Policy and will further Environment Canada's goal of consistent, uniform, fair and predictable enforcement of federal environmental legislation.

## *Stronger Enforcement Mechanisms*

In December 1991, the Minister of the Environment announced a Green Plan initiative to strengthen the government's ability to enforce environmental laws. The new Enhanced Enforcement Program will devote \$55.7 million in additional resources to enforcement activities,





\$39.3 million of which will go directly to implementing CEPA regulations and the water pollution provisions of the *Fisheries Act*.

These funds will allow Environment Canada to: hire 80 new enforcement officers across Canada by 1993-94; negotiate agreements and work-sharing arrangements with the provinces, territories and other federal departments; develop specialized training courses; and create an integrated, computerized information system to support enforcement.

## *National Inspection Plan*

The National Inspection Plan is an annual work plan to identify the number and types of inspections to be carried out under CEPA regulations and interim orders. Staff at Environment Canada's headquarters and regional offices collaborate to produce the plan. They recently adopted a more target-oriented approach—one that would concentrate on the most serious environmental threats in each region.

The past year's targets, which differ from region to region, are detailed in the "CEPA Across Canada" section of this report.

Another example of this focused approach was the accomplishment of a national, special enforcement operation to test compliance with CFC regulations.

### *Special Enforcement Operation on CFC-12*

Between January and March 1991, Environment Canada received information from various sources alleging that several companies were illegally importing bulk CFC-12 without authorization; and alleging that certain other retailers in the automobile parts business were illegally selling 14-ounce cans of air conditioner over the counter.

As these activities contravene Ozone-Depleting Substances Regulations No. 1 and No. 3, Environment Canada launched "Special Enforcement Operation on CFC-12," in the spring and summer of 1991. Enforcement officers closely monitored the refrigeration and automobile parts distribution industries.

Inspectors conducted 121 inspections. As a result of follow-up investigations, 132 charges were laid against 12 companies (96 of those charges were against one company). The Department issued 18 warnings and conducted 5 searches with warrants. Enforcement officers seized approximately 317 cylinders and 78 cans.

## *National Training Program*

Training is central to Environment Canada's enforcement program. The National Training Program has been expanded to ensure that enforcement officers and analysts are trained in everything from basic inspection and investigation skills, to very specialized regulation-specific enforcement activities. Environment Canada has also developed three new courses: "Expert Witness," "Safety," and "Intelligence Gathering."

On the international front, as part of a cooperative agreement with Mexico, Environment Canada extended an invitation to environmental





officers from Mexico to participate in the training program. They will likely attend the fall 1992 or winter 1993 courses.

A federal-provincial working group was established in 1991 to study ways of maximizing federal and provincial training efforts.

## Enforcement Activities

The following tables show 1991-92 enforcement activities under CEPA, updated to July 1992. They do not include related offences under the *Fisheries Act*, however this information is available from the Office of Enforcement.

### Enforcement Activities (1991-92)

| Regulations                                              | Inspections  | Investigations | Warnings  | Directions | Prosecutions | Convictions |
|----------------------------------------------------------|--------------|----------------|-----------|------------|--------------|-------------|
| Storage of PCB Wastes<br>Interim Order                   | 240          | 3              | 44        | 1          |              |             |
| Chlorobiphenyls Regs.                                    | 414          | 31             | 10        | 1          | 1            | 2           |
| PCB Waste Export Regs.                                   | 21           |                | 4         |            |              |             |
| Federal Mobile PCB<br>Treatment and<br>Destruction Regs. | 6            | 2              |           |            |              |             |
| Secondary Lead Smelter<br>Release Regs.                  | 49           |                |           | 1          |              |             |
| Vinyl Chloride Release Regs.                             | 10           |                |           | 1          |              |             |
| Asbestos Mines and Mills<br>Release Regs.                | 20           |                | 1         |            |              |             |
| Chlor-Alkali Mercury<br>Release Regs.                    | 23           | 1              | 1         |            |              |             |
| Chlorofluorocarbon Regs.                                 | 105          | 2              | 1         |            | 2            |             |
| Gasoline Regs.                                           | 263          | 3              |           |            |              |             |
| Contaminated Fuel<br>Interim Order / Regs.               | 1            | 2              |           |            |              |             |
| Ozone-Depleting<br>Substances Regs. No. 1                | 92           | 39             | 8         |            | 3            |             |
| Ozone-Depleting<br>Substances Regs. No. 2                | 9            |                |           |            |              |             |
| Ozone-Depleting<br>Substances Regs. No. 3                | 185          | 26             | 5         | 1          | 6            |             |
| Ocean Dumping Regs.                                      | 100          | 11             | 8         | 1          | 3            |             |
| Phosphorus<br>Concentration Regs.                        | 36           |                |           |            | 1            |             |
| <b>Total</b>                                             | <b>1,574</b> | <b>120</b>     | <b>82</b> | <b>6</b>   | <b>16</b>    | <b>2</b>    |







## Prosecutions (April 1, 1991-March 31, 1992)

| <i>Company</i>                                                           | <i>Date Charged</i> | <i>Alleged Violation</i>                                                                                                                             | <i>Status</i>                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dept. of<br>Public Works<br>Rimouski, Que.                               | April 25            | Ocean Dumping Regs.;<br>1 count between June 1 and Aug. 31, 1990<br>Havre-aux-maisons, Île-de-la-Madeleine                                           | Ordered to bury and eliminate<br>garbage on Île-de-la-Madeleine for no<br>less than \$100,000, (largest penalty<br>since CEPA began)<br>Work to be completed by June 4,<br>1993, and to be evaluated by<br>Environment Quebec |
| Ecolab<br>Mississauga, Ont.                                              | May 22              | Phosphorus Concentration Regs.;<br>alleged offence on Jan. 7, 1991                                                                                   | Pleaded guilty on Sept. 16, 1991 and<br>fined \$4,000 for 1 count                                                                                                                                                             |
| McKerlie-Millen Ltd.<br>and Jack Price<br>Cornwall, Ont.                 | May 22              | Ozone-Depleting Substances Regs. No. 3; allegedly<br>selling CFCs in small cans on April 26, 1991                                                    | Pleaded guilty on Jan. 20, 1992 and<br>fined a total of \$8,000                                                                                                                                                               |
| Alert Automotive<br>Supplies<br>Thornhill, Ont.                          | July 12             | Ozone-Depleting Substances Regs. No. 3;<br>allegedly offering for sale, and selling a product<br>containing CFCs on May 4, 1991                      | Pleaded guilty on September 10, 1991<br>to 3 counts and fined \$2,500                                                                                                                                                         |
| Auto Action Parts and<br>Supplies, Weston, Ont.                          | Aug. 20             | Ozone-Depleting Substances Regs. No. 3;<br>allegedly selling cans containing freon                                                                   | Pleaded guilty on Sept. 21, 1991 to<br>1 count and fined \$2,000                                                                                                                                                              |
| Hi-line Manufacturing<br>Toronto, Ont.                                   | Sept. 23            | Ozone-Depleting Substances Regs. No. 1, No. 3; 96<br>counts, at various locations in Que. and Ont. in 1990-91                                        | Court case not completed                                                                                                                                                                                                      |
| Robert Auto Supplies<br>Toronto, Ont.                                    | Sept. 23            | Ozone-Depleting Substances Regs. No. 3; allegedly<br>selling CFCs to a CEPA inspector on<br>May 21, 1991                                             | Pleaded guilty on March 20, 1992 and<br>fined \$100 (this penalty is under<br>appeal with the Dept. of Justice)                                                                                                               |
| Industries DOMCO<br>Ltée, Farnham, Que.                                  | Oct. 10             | Storage of PCB Wastes Interim Order;<br>allegedly importing a condenser from the U.S.                                                                | Pleaded guilty on April 10, 1992 and<br>fined \$3,500 and costs for 1 count                                                                                                                                                   |
| ICM Automotive Ltd.<br>Montreal, Que.                                    | Oct. 11             | Ozone-Depleting Substances Regs. No. 1;<br>allegedly importing CFC-12 from the U.S.<br>2 counts in April 1991, in Lacolle, Que.                      | Court case not completed                                                                                                                                                                                                      |
| Globe Motorists<br>Supply Co., Marc<br>Cutler, Mount Vernon,<br>New York | Oct. 11,<br>Nov. 25 | Ozone-Depleting Substances Regs. No. 1;<br>allegedly importing CFC-12 from the U.S.<br>6 counts in March, April and May of 1991,<br>in Lacolle, Que. | Court case not completed                                                                                                                                                                                                      |
| Selwyn P. Belsher Ltd.<br>Etobicoke, Ont.                                | Oct. 31             | Ozone-Depleting Substances Regs. No. 3;<br>9 counts for allegedly selling CFCs in a pressurized<br>container less than 10 kg on Sept. 9, 1991        | Pleaded guilty on Jan. 10, 1992 and<br>fined \$30,000 for 1 count; 4 charges<br>withdrawn and 4 charges stayed                                                                                                                |
| Groupe Master<br>Montreal, Que.                                          | Nov. 1              | Ozone-Depleting Substances Regs. No. 1; 3 counts<br>for allegedly importing CFCs from Belgium<br>on 3 separate dates in 1990                         | On Dec. 6, 1991, the company was<br>fined a total of \$6,000; approx. \$5,000<br>in CFCs were seized, confiscated                                                                                                             |
| Entreposage Jarry<br>Montreal, Que.                                      | Nov. 25             | Ozone-Depleting Substances Regs. No. 1; 2 counts<br>of importing CFC-12 from the U.S. in March 1991,<br>in Lacolle, Que.                             | Pleaded guilty to 1 count on Feb. 11,<br>1992, fined \$2,000 and costs<br>1 charge withdrawn                                                                                                                                  |
| Valley Towing Ltd.<br>New Westminster, B. C.                             | Feb. 5              | Ocean Dumping Regs.; alleged offence on<br>Sept. 25, 1991                                                                                            | Court case not completed                                                                                                                                                                                                      |
| Gervais Dubé<br>Trois-Pistoles, Que.                                     | Feb. 6              | Ocean Dumping Regs.; alleged offences between<br>Oct. and Dec. 1990 in Carleton, Que.                                                                | Court case not completed                                                                                                                                                                                                      |
| D.G. Hutzl<br>Wholesale Ltd.<br>Etobicoke, Ont.                          | March 6             | Ozone-Depleting Substances Regs. No. 1; alleged<br>offence of importing bulk CFCs on March 4, 1991<br>in Fort Erie, Ont.                             | Pleaded guilty on April 24, 1992 to<br>1 count and fined \$2,500<br>1 charge withdrawn                                                                                                                                        |





## *CEPA Part VIII: Amendments and Repeal*

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### *Regulations Rolled Over to CEPA*

CEPA subsumes and takes over the *Environmental Contaminants Act*, the *Clean Air Act*, the *Ocean Dumping Control Act*, the nutrient provisions of the *Canada Water Act*, and Section 6(2) of the *Department of the Environment Act*.

Several regulations controlling substances made under these repealed Acts have been "rolled over" to continue in force under CEPA.

### *The Miscellaneous Statute Law Amendment Act*

Non-controversial, minor changes to CEPA (such as typographical or consistency errors, and amendments to the English and French versions) are covered under the *Miscellaneous Statute Law Amendment Act 1991*, passed on February 28, 1992. This Act corrects anomalies, inconsistencies, archaisms and errors in the Statutes of Canada.

### *Amendment to CEPA*

With the creation of CEPA, the List of Toxic Substances (Schedule I) was simply transferred from the *Environmental Contaminants Act*. However, the wording of CEPA Sections 33 and 34 was imprecise, and there remained a legal uncertainty as to whether regulations could be made for substances already appearing on the schedule. This included those regulations that were to be transferred from previous Acts and rolled over into CEPA.

Consequently, an amendment to CEPA was given Royal Assent on June 29, 1989. To ensure that all existing regulations had the force of law, interim orders were made on February 20, 1989 for the nine substances included in the List of Toxic Substances (Schedule I) of CEPA, namely chlorobiphenyls, mirex, polybrominated biphenyls, CFCs, polychlorinated terphenyls, asbestos, lead, mercury and vinyl chloride.





## Conclusion

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### *Expanding CEPA's Scope*

The introduction of the Green Plan in 1990 provided the policy framework for the application of CEPA. As part of this environmental agenda, the federal government announced 50 initiatives over the past year, 15 of which directly involve CEPA. Green Plan resources and objectives will continue to broaden the application of CEPA in the future.

### *Focusing on Prevention*

One of the most important shifts in emphasis in 1991-92 was the movement towards prevention. In shaping policies, Environment Canada will strive to "anticipate and prevent" instead of reverting to "react and cure" solutions.

### *Strengthening Enforcement and Compliance*

Environment Canada is working to improve its ability to enforce environmental laws. With the legislative framework now in place, the challenge that remains is to enforce regulations the best way possible, with the resources available. Since last year's report, the government has increased CEPA's enforcement budget. In addition, the National Inspection Plan has become more target-oriented. In this context, enforcement officers are able to concentrate on priorities such as the "Special Enforcement Operation on CFC-12."

### *Towards a Cleaner Environment*

Certainly the ultimate aim of environmental laws is to improve the quality of our environment. Scientific monitoring is an essential component of our ability to determine the effectiveness of these laws in enhancing environmental quality.

The recently published *State of the Environment Report* presents a few positive signs: for example, the air in Canadian cities has lower levels of most contaminants than it did 15 years ago. Thanks to tougher motor vehicle emissions standards and the phase-out of lead in gasoline, lead levels in urban areas dropped 93 per cent between 1974 and 1989. Carbon monoxide was reduced by 63 per cent, sulphur dioxide by more than 50 per cent, and dust particles by 44 per cent over the same period.

Overall, however, the report indicates that we have many environmental challenges before us. Although it is too early to determine the full impact of CEPA, Environment Canada recognizes the importance of monitoring as an activity that must become more integrated if we are to document CEPA's progress in upcoming years.















